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ABSTRACT

The Texas Education Agency awarded twenty competitive grants to Head Start programs in the state. The focus of the grants was on emergent literacy and pre-reading skills. Teachers, mentors, and administrators underwent intensive training. To investigate whether children emerged from the grant programs ready to enter school reading, an outside program evaluation was conducted by each grantee. As part of the evaluation, pretest and posttest scores for African American, Hispanic American, and European American students were analyzed to determine if significant differences existed between groups targeted using grant materials, mentoring, and pre-reading strategies, and those of a control group. Subjects were 174 Head Start participants, assessed in October and again in May using a battery of assessment instruments that included the Peabody Picture Vocabulary Test, Expressive Vocabulary Test, and Developing Skills Checklist. Spanish-speaking children completed Spanish versions of these instruments. Findings indicated that Hispanic American students scored higher on the majority of the tests administered. The scores of the African Americans were higher than the European Americans. The European Americans did perform better than the other groups on the math portion of the DSC. The data must be viewed in light of the fact that the groups were not the same size. (HTH)

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An Analysis of Pretest and Post Test Scores of Head Start African American, Hispanic American and European American Students Engaged in an Intensive Emergent Literacy Program

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An Analysis of Pretest and Posttest Scores of Head Start African American, Hispanic American, and European American Students Engaged in an Intensive Emergent Literacy Program

Abstract

This paper focuses on an analysis of pretest and posttest scores of Head Start students assessed during the school year 2000-2001. The analysis will describe significant differences in student achievement of African American, Hispanic American, and European American students. The data results from a program evaluation of one of the twenty programs awarded a Texas Head Start Educational Component Grant. The grant emphasized emergent literacy. The pretests were administered in October 2000. The posttests were administered in May 2001. The battery of tests included the Peabody Picture Vocabulary Test, the Expressive Vocabulary Test, and the Developing Skills Checklist. For students who primary language is not English, the assessment instruments included the La Lista, the Peabody Picture Vocabulary Test-Spanish, and Expressive Vocabulary Test-Spanish.

Introduction

The Texas Education Agency awarded twenty competitive grants to Head Start Programs in the state. The services provided by the program started at the beginning of the 2000 school year. Intensive training for teachers, mentors, and administrators was

provided by the Center for Improving the Readiness of Children for Learning and Education (CIRCLE) at the University of Texas Health Science Center located in Houston, Texas. The training included a five-day session in the summer 2000. Mentors were required to work with teachers for at least 3 hours per week. Mentors attended CIRCLE training on a monthly basis.

The focus of the grant was on emergent literacy and pre-reading skills. A research-based approach formed the rational for the focus. Students who do not learn to read well in the first and second grades are likely to have problems with reading throughout their lives (Baumgarten, Lege', and De Leon, 2001). The process of learning to read starts with the ability to hear manipulative words, syllables, and sounds of the language. Explicit instruction in these emergent literacy skills must occur for most children. The evidence supports that children are not prepared naturally to conceive of spoken language as a string of individual words or as individual units of meaning (Adams, 1990). "That direct instruction in alphabetic coding facilitates early reading acquisition is one of the most well-established conclusions in all of behavioral sciences" (Stanovich, 1980, p. 39).

To investigate that children emerged from the grant read to enter school reading, an outside program evaluation was conducted by each grantee. As part of the evaluation pretest and posttest scores were analyzed to determine if significant differences existed between groups targeted using grant materials, mentoring, and strategies as compared to a control group who did not receive the treatment. This paper presents the findings from this component of the evaluation comparing the results of African American, Hispanic American, and European students.

Research-based Approach

Research evidences that for pre-reading instruction to be successful, twelve components must be addressed. Gilcrest (1997) provides a nonsequential list of the twelve components of research-based programs for emergent literacy instruction. The list includes:

1. Children have opportunities to expand their use and appreciation of oral language
2. Children have opportunities to expand their use and appreciation of printed language
3. Children have opportunities to hear good stories and informational books read aloud daily
4. Children have opportunities to understand and manipulate the building blocks of spoken language

5. Children have opportunities to learn about and manipulate the building blocks of written language.

6. Children have opportunities to learn the relationship between the sounds of spoken language and the letters of written language

7. Children have opportunities to learn decoding strategies

8. Children have opportunities to write and relate their writing to spelling and reading

9. Children have opportunities to practice accurate and fluent reading in decodable stories

10. Children have opportunities to read and comprehend a wide assortment of books and other texts

11. Children have opportunities to develop and comprehend new vocabulary through wide reading and direct vocabulary instruction.

12. Children have opportunities to learn and apply comprehension strategies as they reflect upon and think critically about what they read.

These twelve components are aligned to pre-reading skills for preschoolers described in the LBJ School of Public Affairs Policy Research Project on Early Childhood Education in Texas (Texas Instruments Foundation, 1999). The skills should be taught simultaneously and integrated into the total educational program. The skill areas include:

1. Oral language
2. General knowledge
3. Print awareness

4. Alphabet knowledge
5. Phonemic awareness
6. Pre-writing

Evaluation Method

Participants

One hundred seventeen four-year-old students participated in the study. The students attended Head Start in public schools primarily located in rural areas of east Texas. Twenty-nine students were African American, 5 children were Hispanic American, and 83 students were European American. The participants were enrolled in classes targeted for treatment by the grant. The number of students to participate was selected by CIRCLE.

Instrumentation

Participants were assessed using a battery of assessment instruments. The battery included the Peabody Picture Vocabulary Test (PPVT), the Expressive Vocabulary Test (EVT), and the Developing Skills Checklist which had four subtest areas, print concepts, memory, math, and auditory concepts. For students whose primary language is Spanish, the assessment instruments included La Lista, which is the Spanish version of the DSC, the Peabody Picture Vocabulary Test-Spanish (PPVT-Spanish), and

the Expressive Vocabulary Test-Spanish (EVT-Spanish). These assessment instruments were selected by CIRCLE and were required to be used in the evaluation.

Design and Procedure

The battery of tests was given in October 2000 as a pretest. The same battery was administered in May 2001 as a posttest. The time frame for administering the tests was prescribed by CIRCLE. The tests were administered by outside assessment specialists. The assessment specialist had extensive backgrounds in assessment and possessed either a master or doctorate degree.

Data Analysis

In the present study, the data was analyzed by using the t-test. The repeated measures t-test was designed to recognize statistically significant mean differences between repeated measures or data. "A repeated measures design may be more useful than an independent-measures study when one wants to observe changes in behavior in the same subjects, as in learning or developmental studies. An important advantage of the repeated-measures design is that it removes or reduces individual differences, thus lowering sample variability and tending to increase the chances for obtaining significant result" (Gravetter &

Wallnau, 1996, p. 303). Each group mean was also compared to the average group mean.

Results

The European American students scored above the mean in two out of the four areas of the Developmental Skills Checklist (DSC). They scored above the mean for the math and memory section. This group scored slightly below the mean for the auditory and print concepts section. The European American students also scored below the mean on the Peabody Picture Vocabulary Test (PPVT) and the Expressive Vocabulary Test (EVT). The African American students scored above the mean on the PPVT and on the print concept section of the DSC. The African American students scored higher than the mean and the other student groups on the EVT. Nevertheless, they scored slightly below the mean on the math, memory, and auditory sections of the DSC. The Hispanic American students scored extremely higher than the mean and higher than the other student groups on the auditory and print concepts section of the DSC and on the PVT. This group also scored higher than the mean on the math section of DSC and the Expressive Vocabulary Test. Yet, the Hispanic American students

scored moderately lower than the other groups on the memory section of the DSC.

Discussion

The present data indicated that Hispanic American students scored higher on the majority of the tests administered. The scores of the African Americans were higher than the European Americans. The European Americans did perform better than the other groups on the math portion of the DSC. This data must be viewed in light of the fact that the groups were not the same size. This difference could cause the data to be skewed.

The present study provides information that additional studies of this population should be conducted. One aspect that could provide additional insight would be to compare Hispanic American students who are more than two generations American born with Hispanic American students who are first generation Americans. It would also be of interest to compare the scores of control group students with targeted students by ethnicity.

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